

1 What is claimed is:

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3 1. An apparatus for collecting samples for mass spectrometric
4 analysis, said apparatus comprising:

5 a tray for holding said sample material;

6 a robotic interface; and

7 a capillary having an inlet end and an outlet end;

8 wherein said outlet end of said capillary is positioned such
9 that ions produced from said samples are introduced into a mass
10 analyzer, and wherein said inlet end of said capillary is
11 positioned by said robotic interface for accepting ions of said
12 samples.

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14 2. An apparatus according to claim 1, wherein said capillary
15 comprises a channel having a helical structure.

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17 3. An apparatus according to claim 1, wherein said inlet ends
18 and said outlet ends comprise conductive end caps.

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20 4. An apparatus according to claim 1, wherein said ions are
21 transported from an ionization source into a first vacuum region
22 of a mass spectrometer.

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24 5. An apparatus according to claim 4, wherein said ionization
25 source is an API source.

1 6. An apparatus according to claim 4, wherein said ionization
2 source is an ESI device.

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4 7. An apparatus according to claim 4, wherein said ionization
5 source is a pneumatic assisted electrospray source.

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7 8. An apparatus according to claim 4, wherein said ionization
8 source is an electron impact source.

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10 9. An apparatus according to claim 4, wherein said ionization
11 source is a chemical ionization source.

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13 10. An apparatus according to claim 4, wherein said ionization
14 source is a matrix assisted laser desorption ionization source.

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16 11. An apparatus according to claim 4, wherein said ionization
17 source is a plasma desorption source.

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19 12. An apparatus according to claim 4, wherein said ionization
20 source uses liquid chromatography.

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22 13. An apparatus according to claim 1, wherein said apparatus is
23 used to multiplex sample materials.

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25 14. An apparatus for collecting samples for analysis in a mass

1 spectrometer, said apparatus comprising:
2 a tray for holding said sample material;
3 a robotic interface;
4 first and second capillary sections each having an
5 inlet end and an outlet end; and
6 a union having first and second openings;
7 wherein said outlet end of said first capillary section is
8 removably positioned within said first opening of said union, and
9 wherein said inlet of said second capillary section is removably
10 positioned within said second opening of said union.

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12 15. An apparatus according to claim 14, wherein said first
13 section comprises a channel having a helical structure.

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15 16. An apparatus according to claim 14, wherein said union
16 comprises means for removably securing said ends of said first
17 and second sections.

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19 17. An apparatus according to claim 14, wherein said union
20 comprises means for providing an airtight seal between said ends
21 of said first and second sections within said union.

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23 18. An apparatus according to claim 14, wherein said inlet ends
24 and said outlet ends comprise conductive end caps.

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1 19. An apparatus according to claim 1, wherein said ions are
2 transported from an ionization source into a first vacuum region
3 of a mass spectrometer.

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5 20. An apparatus according to claim 19, wherein said ionization
6 source is an API source.

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8 21. An apparatus according to claim 19, wherein said ionization
9 source is an ESI device.

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11 22. An apparatus according to claim 19, wherein said ionization
12 source is a pneumatic assisted electrospray source.

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14 23. An apparatus according to claim 19, wherein said ionization
15 source is an electron impact source.

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17 24. An apparatus according to claim 19, wherein said ionization
18 source is a chemical ionization source.

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20 25. An apparatus according to claim 19, wherein said ionization
21 source is a matrix assisted laser desorption ionization source.

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23 26. An apparatus according to claim 19, wherein said ionization
24 source is a plasma desorption source.

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1 27. An apparatus according to claim 19, wherein said ionization
2 source uses liquid chromatography.

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4 28. An apparatus according to claim 14, wherein said apparatus
5 is used to multiplex sample materials.

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